


5.00 credits

30.0 h + 30.0 h

Q2

Teacher(s)	Ponce Augusto ;
Language :	French
Place of the course	Louvain-la-Neuve
Prerequisites	<i>The prerequisite(s) for this Teaching Unit (Unité d'enseignement – UE) for the programmes/courses that offer this Teaching Unit are specified at the end of this sheet.</i>
Learning outcomes	
Evaluation methods	<p>Skill acquisition will be assessed in a final exam.                      Questions will require :</p> <ul style="list-style-type: none"> <li>• render material, including definitions, theorems, proofs, examples,</li> <li>• select and apply methods from the course to solve problems and exercises</li> <li>• adapt methods of demonstration from the course to new situations,</li> <li>• synthesize and compare objects and concepts.</li> </ul> <p>Assessment will include :</p> <ul style="list-style-type: none"> <li>• the knowledge, understanding and application of the various mathematical objects and methods of the course,</li> <li>• the rigor of the developments, proofs and justifications,</li> <li>• the quality of the writing of the answers.</li> </ul>
Teaching methods	<p>The learning activities consist of lectures and practical sessions.                      The lectures aim to introduce the fundamental concepts, to motivate them by showing examples and establishing results, to show their reciprocal links and their links with other courses in the Bachelor of Mathematical Sciences program.                      The practical sessions aim at deepening the concepts discussed in the lecture.</p>
Content	<p>The course will cover the abstract theory of measure and harmonic analysis elements in Euclidean space :</p> <ul style="list-style-type: none"> <li>• Fréchet measure and integral,</li> <li>• decompositions of measures,</li> <li>• integral convergence theorems,</li> <li>• Lebesgue differentiation theorem,</li> <li>• product measure and theorems of Fubini and Tonelli,</li> <li>• change of variables theorem,</li> <li>• convolution product,</li> <li>• series and Fourier transform.</li> </ul>
Inline resources	Additional documents on <a href="#">Moodle</a> .
Faculty or entity in charge	MATH

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Bachelor in Mathematics	MATH1BA	5	LMAT1121 AND LMAT1122 AND LMAT1221	
Additional module in Mathematics	APPMATH	5		